CH2M•WG IDAHO, LLC

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1580 Sawtelle Street
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208-533-0411

December 22, 2015

CCN 318641

Mr. Brian Ragan, P. G.
Idaho Department of Water Resources
UIC Program
322 East Front Street
PO Box 83720
Boise, Idaho 83720-0098

SUBJECT: Request for Use of Wells TAN-2271 and TAN-2272 for Injection of Amendments in Support of In-Situ Bioremediation at Test Area North Operable Unit 1-07B

REFERENCES: K. J. Dreher letter to C. S. Allred, Injection of amendments and treated ground water into the Eastern Snake Plan Aquifer ("ESPA") in support of remedial actions at Test Area North ("TAN") OU 1-07B, INEEL, April 3, 2001

Dear Mr. Ragan:

This letter requests approval from the Idaho Department of Water Resources (IDWR) to use wells TAN-2271 and TAN-2272 for injecting amendments in support of In-Situ Bioremediation (ISB), under a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) remedial action for Operable Unit OU 1-07B, at the Test Area North (TAN) Facility on the Idaho National Laboratory.

IDWR previously approved the injection of amendments for ISB in the referenced letter. Wells TAN-2271 and TAN-2272 were drilled as remediation wells in 2015 and are upgradient from well TAN-28. Well TAN-28 has a higher trichloroethylene (TCE) concentration than other wells in the vicinity. The approach is to use wells TAN-2271 and TAN-2272 for injection of amendment to treat the TCE source affecting well TAN-28.

The planned injection amendments include WilClear Plus and LactOil. WilClear Plus is a lactate and volatile fatty acid based product and LactOil is a soy microemulsion containing oleaginous compounds (slowly soluble substrate) and ethyl lactate. These and/or other similar lactate based amendments will be injected during ISB. The first injections will use approximately 250 gallons of WilClear Plus diluted at a 10 to 1 ratio with potable water and injected at approximately 20 gallons per minute. The size, injection rate and amendment selection of future injections will depend on the results of the initial and subsequent injections.

Well TAN-2271 was drilled to a depth of 289 feet below ground surface (bgs), but was filled with slough back to a depth of 280 feet bgs. Well TAN-2271 was completed as an open hole with a single pump set at a depth of 249 feet bgs. The plan is to inject amendment at the top of the aquifer in well TAN-2271.

Well TAN-2272 was drilled to a depth of 287 feet bgs, but was filled with slough back to a depth of 281 feet bgs. Well TAN-2272 was constructed with two open borehole sampling intervals separated by a packer set from 259 to 263 ft bgs. The upper interval will be sampled using a portable pump in a 2 inch pipe with a 5 ft screen that was placed down to 249 ft bgs. The deep interval will be sampled using a dedicated pump set at 273 ft bgs. The ISB injection plan would be to inject amendment in the upper interval of TAN-2272. Additional well completion and construction information can be found in the attached well completion report (RPT-1424).

CH2M-WG Idaho, LLC (CWI) plans to use the new wells for injection of amendments to support ISB activities in accordance with the OU 1-07B Record of Decision. The use of these wells for the extended injection of amendments will not impact future beneficial uses of the groundwater.

The injection of ISB amendments represents the best approach for addressing the TCE source affecting TAN-28. This letter is submitted by CWI as authorized by the U.S. Department of Energy. If you have any questions regarding this request or need additional information, please contact Donna Nicklaus (CWI) at 208-533-0737.

Sincerely,

D. P. Hutchison, Vice President
ESH & QA

DN:vm

Enclosure

cc: (w/o Enc.)
P. K. Bowers, DOE-ID, MS 1226
N. Badrov, DOE-ID, MS 1222 (w/Enc.)
D. F. Koch, Idaho DEQ
T. J. Dieter, CWI
N. R. Jensen, DOE-ID, MS 1222
M. R. Lewis, CWI

bcc: (w/o Enc.)
H. S. Forsythe, MS 9140
M. J. Macconnell, MS 9125
D. Nicklaus, MS 9208
M. S. Roddy, MS 9140
F. L. Webber, MS 9140
OU 1-07B Project File #23339
Correspondence Control, MS 9115
D. P. Hutchinson Letter File (DPH-126-15)

Uniform File Code: 6102
Disposition Authority: ENV1-h-1
Retention Schedule: Cutoff at submission of the final financial report for the site, or after resolution of all issues, whichever is later. Destroy 10 years after cutoff with written approval from the EPA award official.

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